

Date: Thursday, 13/11/2008 1:06:29 PM
User: Julie Dawson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services
Job Number : 43422
Estimate Number : 10857
P.O. Number :
This Issue : 13/11/2008 S.O. No. :
Prsht Rev. : NC
First Issue : / / Type : MACHINED PARTS
Previous Run : 43021
Written By :
Checked & Approved By : JLD 08.11.14
Comment : Est Rev:A 05.10.18 New issue/ KJ/EC
Est Rev:B Now on Doosan 08-05-14 JLM Verified By:DD
Est Rev:C 08-08-12 revE as per dwg (ecn 08-507) DD verified by:EC
Drawing Name : STEM
Part Number : D34073
Drawing Number : D3407 REV E
Project Number : N/A
Drawing Revision : E
Material :
Due Date : 05/12/2008 Qty: 40 Um: Each

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 M174R0750 17-4 round bar .750



Comment: Qty.: 0.3843 f(s)/Unit Total: 15.3720 f(s)

Material: 17-4ph SS Round Bar Ø0.750(M17-4-R0.750)

Identify for D3407-3

Batch: M109478

?? M108710?? => 34 inches

SA 08/12/06

2.0 DOOSAN LATHE DOOSAN LATHE



Comment: DOOSAN CNC LATHE

1-Turn as per Folio FA597 Rev: VA & Dwg D3407 Rev: E

2-Deburr

SA 08/12/06

(38)

(M10)

3.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

SA 08/12/06

(38)

(M10)

4.0 QC8 SECOND CHECK



Comment: SECOND CHECK

SA 08-12-09

(38)

5.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: CARL

SA 8/14/09 (38)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3407-3 PAR #: N/A Fault Category: Prod / Machined Parts NCR: Yes No DQA: D Date: 08/10/12
D3407-043 D206-640-411/412
Resolution: SCRAP Disposition: SCRAP QA: N/C Closed: A Date: 08/10/12

NCR: <u>43422</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>08/12/08</u>	<u>20</u>	<u>1 part too short on dimensions 4.325, .150 and .350</u> <u>R.C. Incorrect tool offset operator error.</u>	<u>[Signature]</u>	<u>Scrap and destroy and replace Qty 1</u> <u>B# M107478</u>	<u>SD</u> <u>08/12/08</u>	<u>S</u> <u>08/12/10</u>	<u>[Signature]</u>	<u>S</u> <u>8/12/08</u>
<u>08/12/08</u>	<u>20</u>	<u>1 part scrap. Part accidentally ran twice on 2nd op.</u> <u>R.C. Operator Error.</u>	<u>[Signature]</u>	<u>Scrap and destroy and replace Qty 1</u> <u>B# M107478</u>	<u>SD</u> <u>08/12/08</u>	<u>S</u> <u>08/12/10</u>	<u>[Signature]</u>	<u>S</u> <u>8/12/08</u>

NOTE: Date & initial all entries

Date: Thursday, 13/11/2008 1:06:29 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEM

Job Number: 43422

Part Number: D34073

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC21

FINAL INSPECTION/W/O RELEASE



08/12/08 JF

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



mf 08-12-09

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 43422
Description: Stem		Part Number: D3407-3
Inspection Dwg: D3407	Rev: E	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

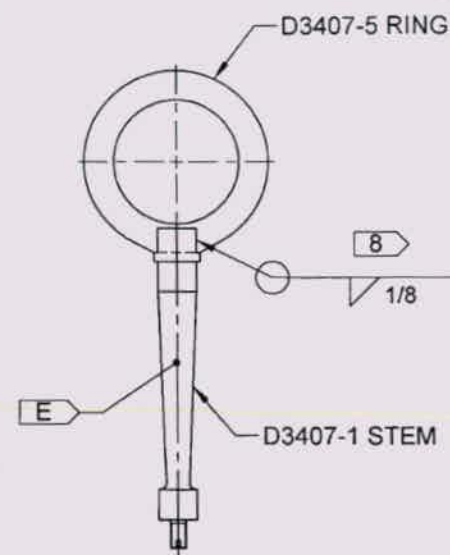
☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.063	+/-0.010	.063	/			
1/4-28 UNF	Max: 0.2668 Min: 0.2635	.265	/			
Major Ø	Max: 0.249 Min: 0.2425	.246	/			
Ø0.625	+/-0.010	Ø.626	/			
Ø0.363	+/-0.010	Ø.360	/			
Ø0.750	+/-0.010	Ø.750	/			
R0.100	+/-0.010	R.100	/			
0.470	+/-0.010	.471	/			
0.250	+/-0.010	.250	/			
2.555	+/-0.010	2.555	/			
3.305	+0.000/-0.010	3.304	/			
4.325	+/-0.010	4.326	/			
0.150	+/-0.010	.151	/			
0.550	+/-0.010	.550	/			
0.625	+/-0.010	.626	/			
0.250	+0.010/-0.000	.255	/			

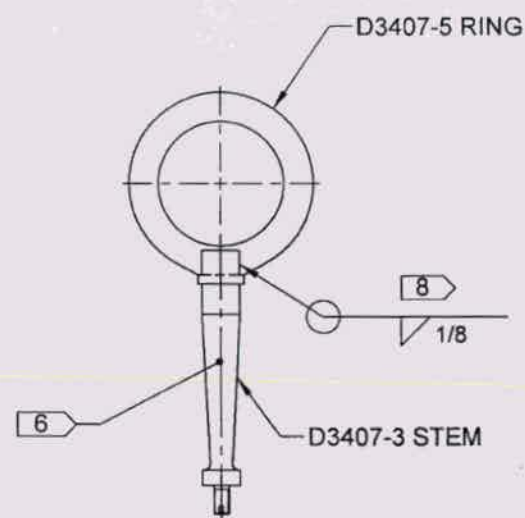
Measured by: SD	Audited by: JLM	Prototype Approval:	N/A
Date: 08/12/06	Date: 08-12-06	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.11.08	New Issue	KJ/JLM	
B	07.09.26	Tolerances revised	KJ/EC	
C	08.05.14	Dimensions updated per Dwg Rev D	KJ/JLM	
D	08.10.07	Dimensions updated per Dwg Rev E	KJ/DD	

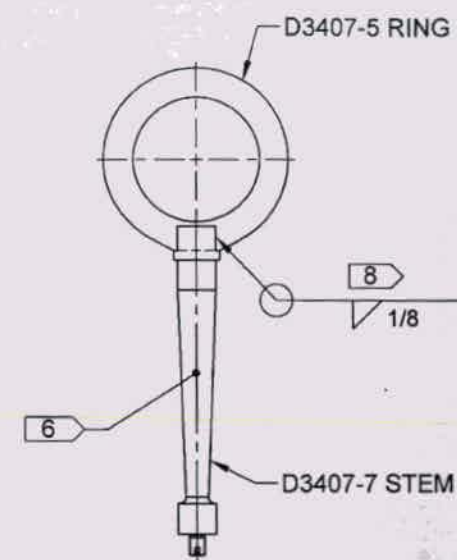
QTY -041	QTY -043	QTY -045	PART NUMBER	DESCRIPTION
X			D3407-041	TOW RING
	X		D3407-043	TOW RING
		X	D3407-045	TOW RING
1			D3407-1	STEM
	1		D3407-3	STEM
1	1	1	D3407-5	RING
		1	D3407-7	STEM



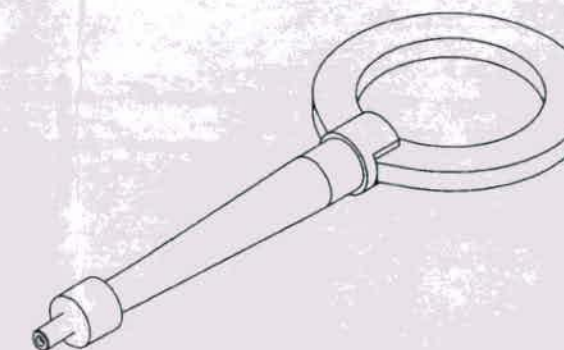
D3407-041 TOW RING



D3407-043 TOW RING



D3407-045 TOW RING



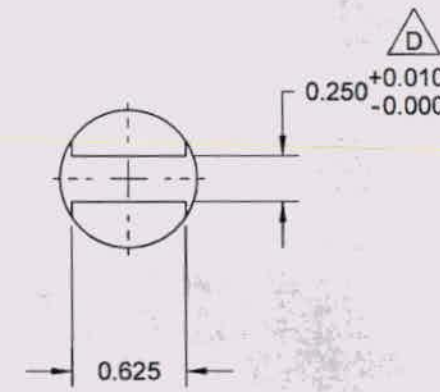
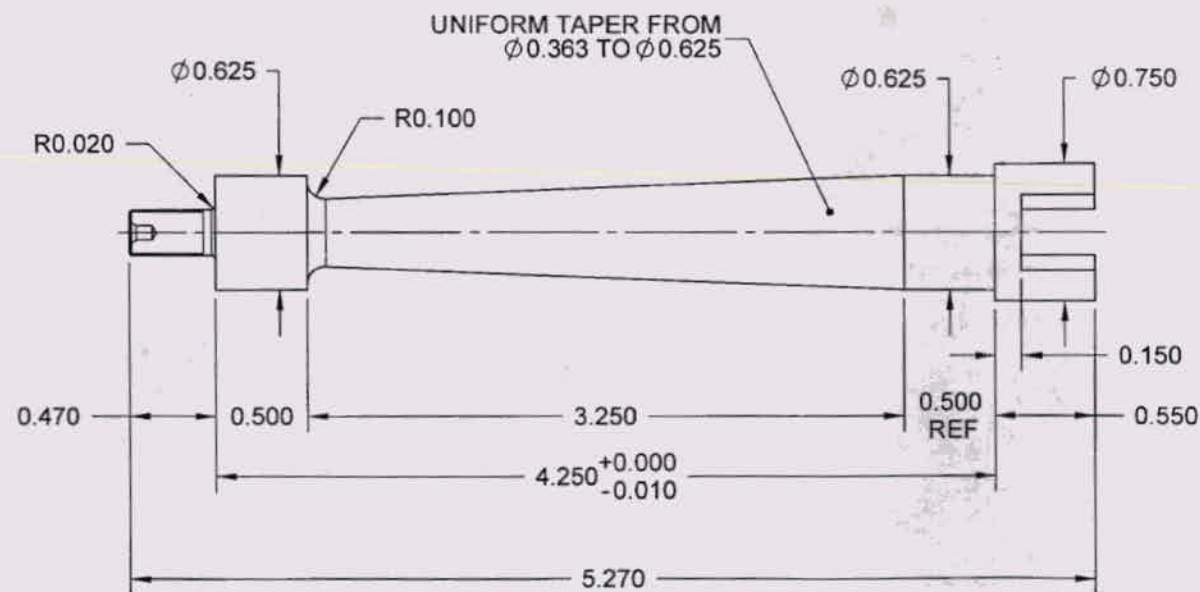
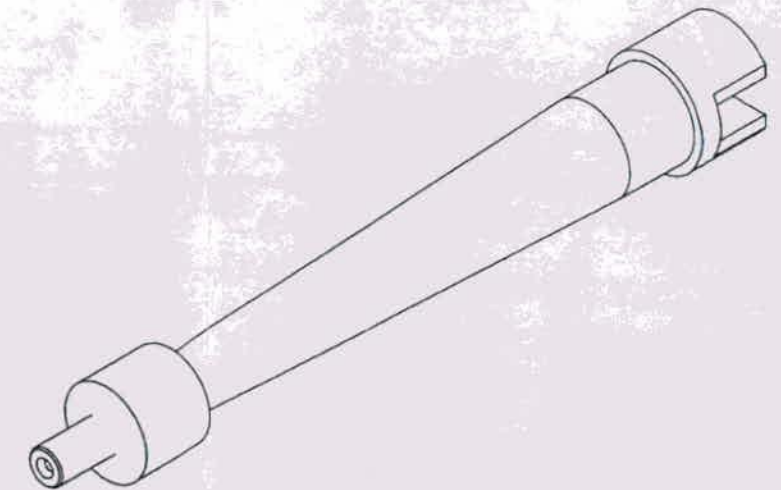
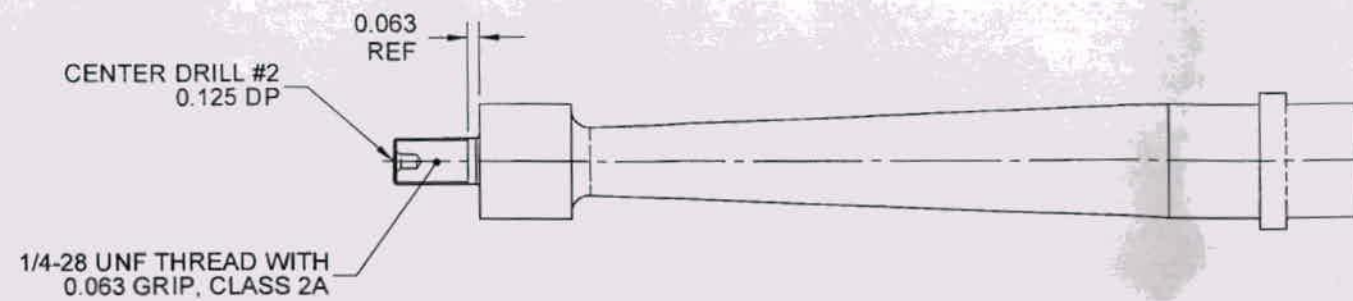
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NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3 (EXCEPT THREADS)
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3407-XXX" USING BLACK FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: D3407-041 - 0.60 lbs, D3407-043 - 0.53 lbs, D3407-045 - 0.61 lbs
- 8) WELD PER DART QSI 004 ON ALL EDGES BETWEEN STEM AND RING

E	ADD D3407-045 (ZN B2-1, D8-1); ADD D3407-7 (ZN B6-5); REVISED NOTE 6 TO ADD IDENTIFICATION (ZN A5-1); REASON: PRODUCTION FACILITY	PH	08.07.23
D	D3407-1/-3 SLOT WAS ROUND NOW FLAT FOR ASSEMBLY WITH D3407-5 (ZN C2-2, C2-3); D3407-5 WAS ROUND NOW FLAT ON ONE END FOR ASSEMBLY WITH D3407-1/-3 (ZN B6-4); REASON: PRODUCTION FACILITY	PH	08.04.07
C	-1/-3 LONGER FOR FIT W/WASHER	CP	05.09.09
B	UPDATE DIAMETER, THREAD CLASS ADDED	CP	05.06.17
A	NEW ISSUE	CP	05.03.16
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN			
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3407	SHEET 1 OF 5
APPROVED		TITLE	SCALE
DE APPR.		TOW RING	NTS
DATE	08.07.23	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	



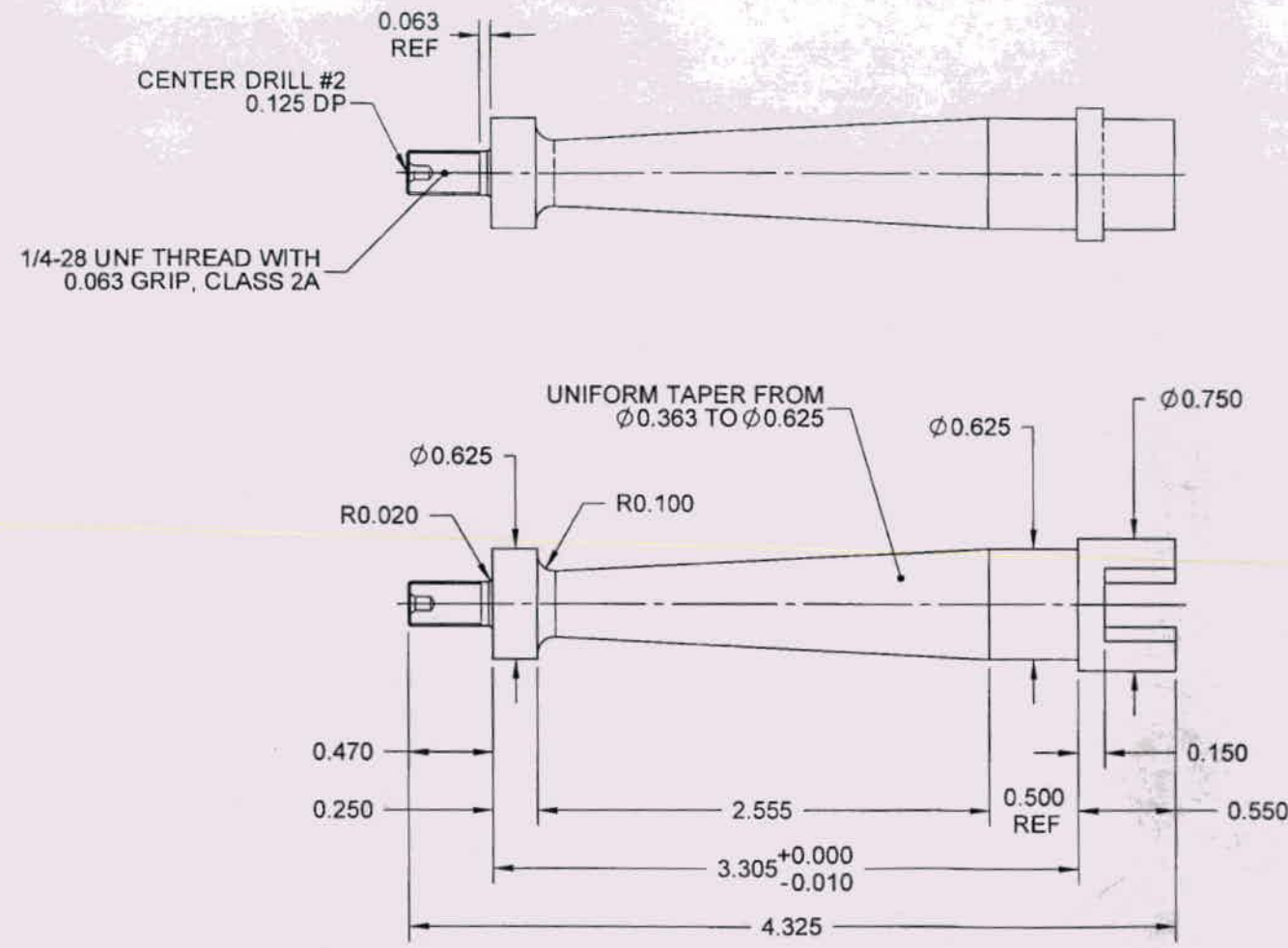
D3407-1 STEM

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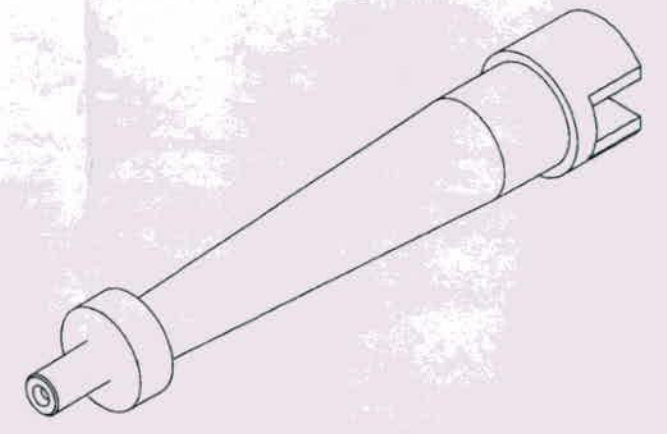
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- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.33 lbs

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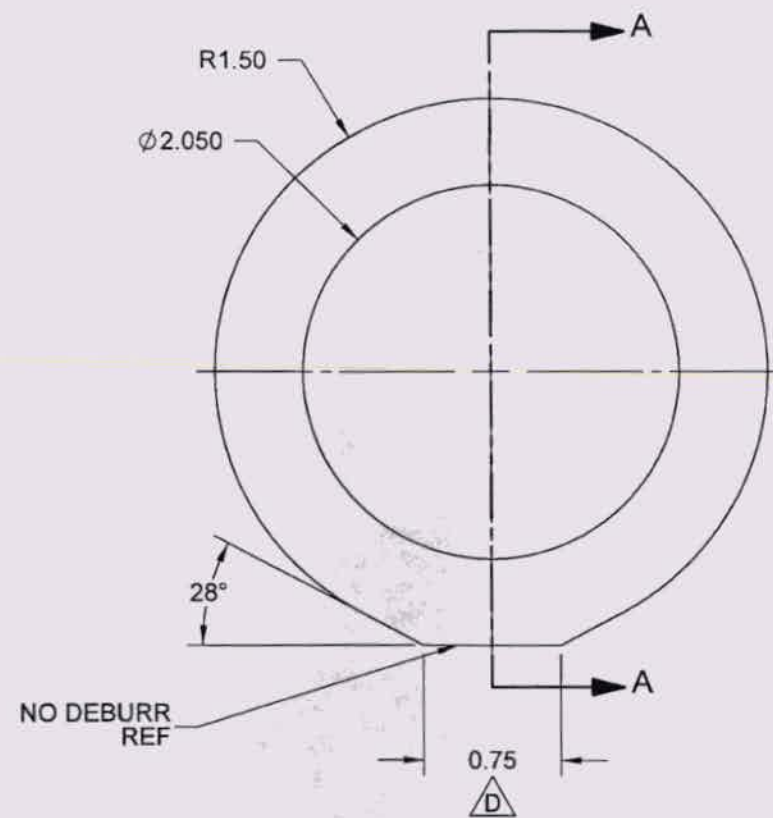
D3407-3 STEM



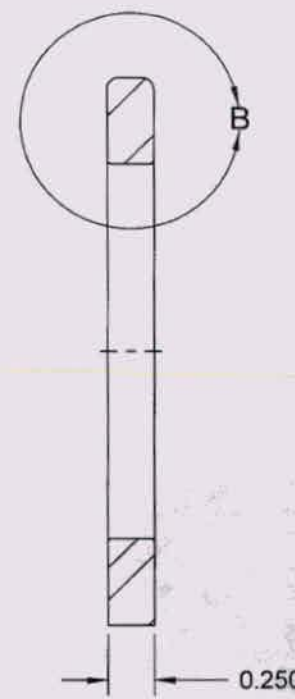
- NOTES:**
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.27 lbs

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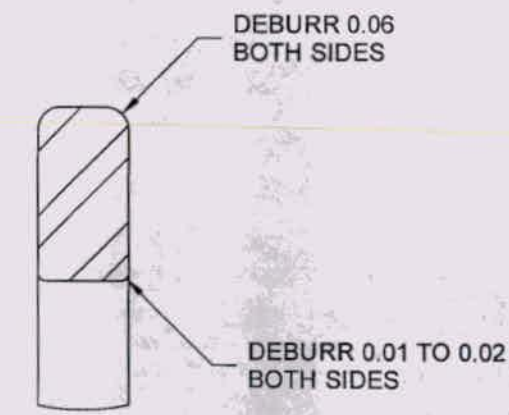
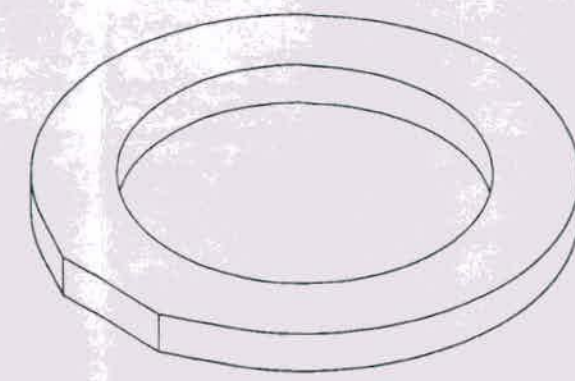
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D3407-5 RING



SECTION A-A



**DETAIL B
SCALE 2X**

- NOTES:**
- 1) MATERIAL: 17-4 PH SS BAR PER AMS 5604/5643 (REF. DART SPEC M17-4-B)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.27 lbs

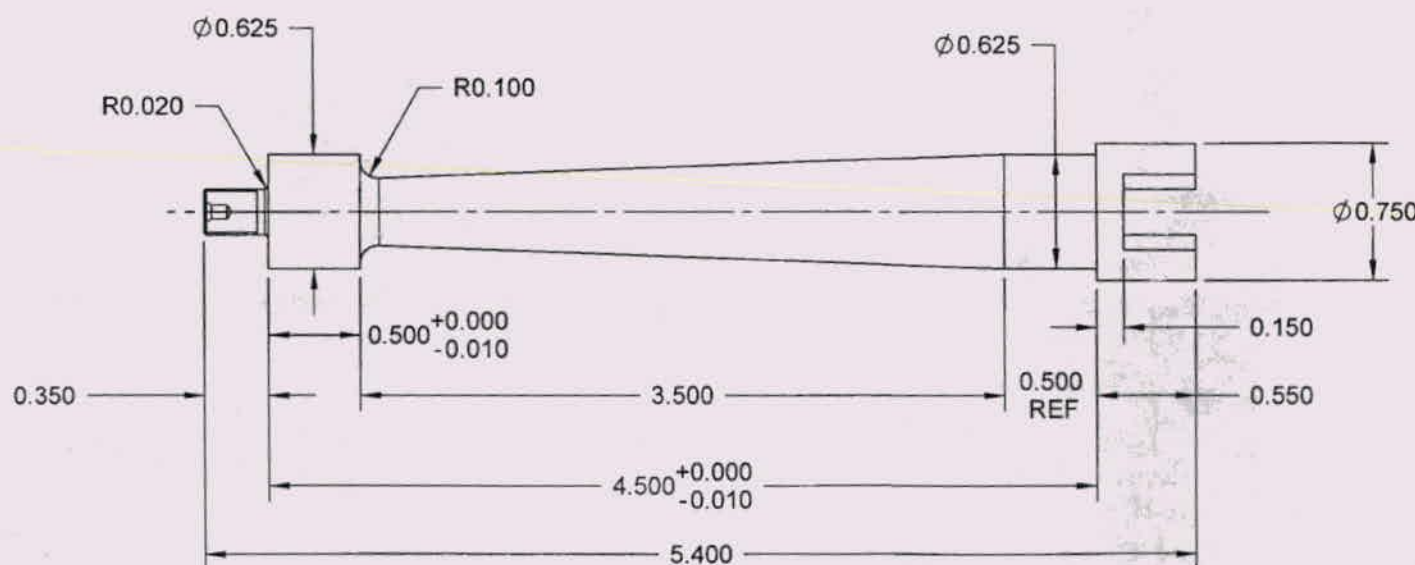
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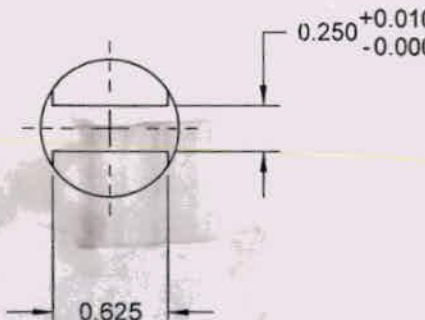
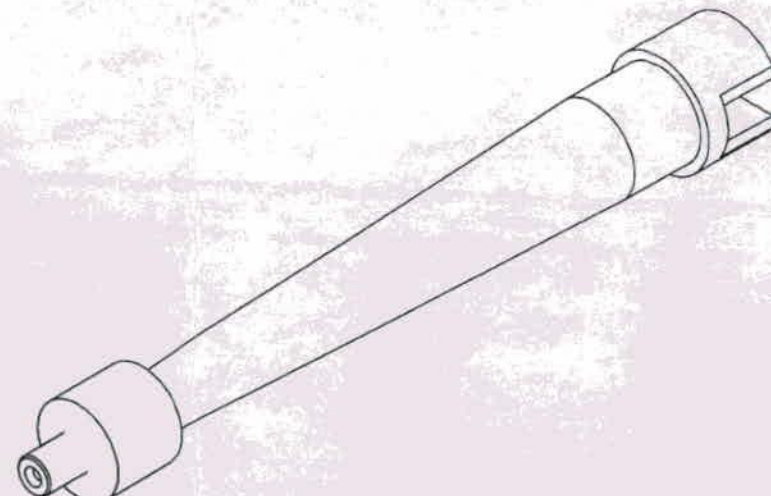
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0.063
REF
CENTER DRILL #2
0.125 DP

1/4-28 UNF THREAD WITH
0.063 GRIP, CLASS 2A



E D3407-7 STEM



- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.34 lbs

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